

# **Memory Modules**

Document Part Number: 419668-001

January 2007

This guide explains how to replace and upgrade memory in the computer.

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# Adding or replacing memory modules

The computer has 2 memory module compartments. The primary memory module compartment is located under the keyboard. The expansion memory module compartment is located on the bottom of the computer.

The memory capacity of the computer can be increased by replacing the existing memory module in the primary memory module slot or the expansion memory module slot.



**WARNING:** To reduce the risk of electric shock and damage to the equipment, unplug the power cord and remove all batteries before installing a memory module.

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**CAUTION:** Electrostatic discharge (ESD) can damage electronic components. Before beginning any procedure, ensure that you are discharged of static electricity by touching a grounded metal object.

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## Adding a memory module to the expansion memory module slot

To replace or add a memory module in the expansion memory module slot:

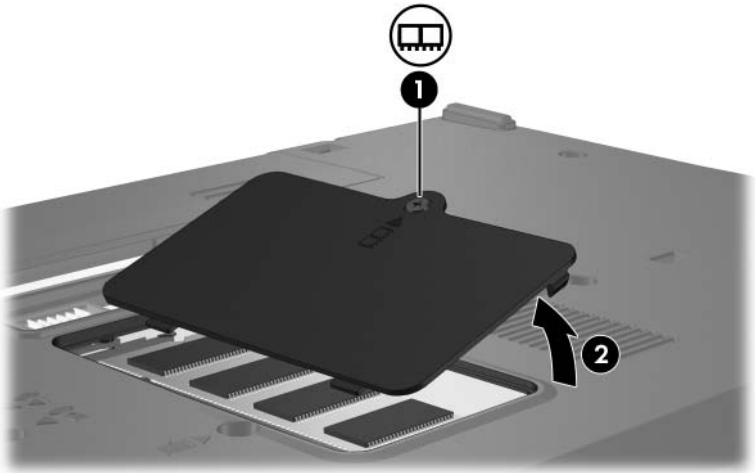
1. Save your work and close all open programs.



If the computer is in the Sleep state or in Hibernation, you must first exit Sleep or Hibernation before shutdown is possible.

2. Click **Start**, click the arrow next to the **Lock** button, and then click **Shut Down**.
3. Close the display.
4. Disconnect all external devices connected to the computer.
5. Unplug the power cord from the AC outlet.
6. Turn the computer upside down on a flat surface.
7. Remove the battery from the computer.

8. Loosen the memory module compartment cover screw **1**.
9. Lift the memory module compartment cover **2** away from the computer.



10. Remove the memory module:

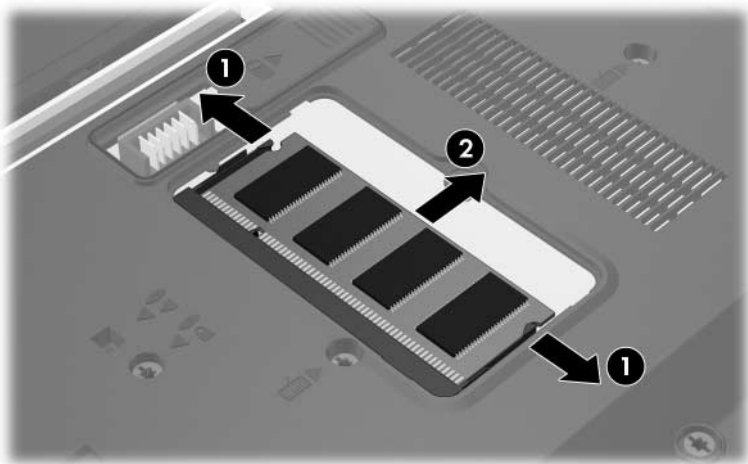
- a. Pull away the retention clips **1** on each side of the memory module.

The memory module tilts up.

△ To prevent damage to the memory module, hold the memory module by the edges only. Do not touch the components of the memory module.

- b. Grasp the edge of the memory module **2**, and gently pull the module out of the memory slot.

To protect a memory module after removal, place it in an electrostatic-safe container.

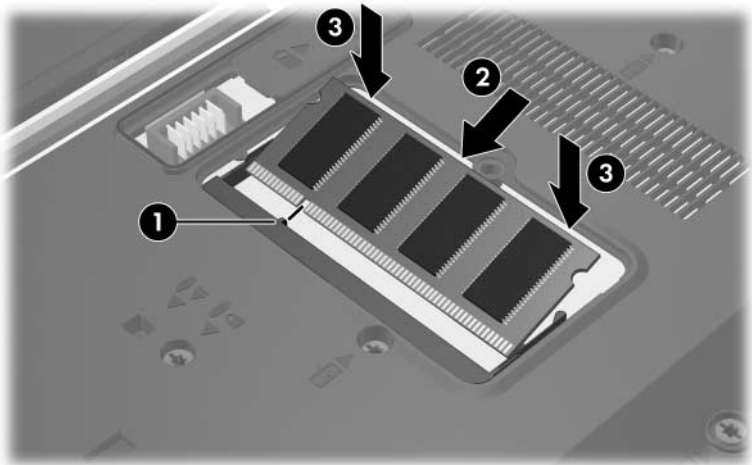


11. Insert a new memory module:

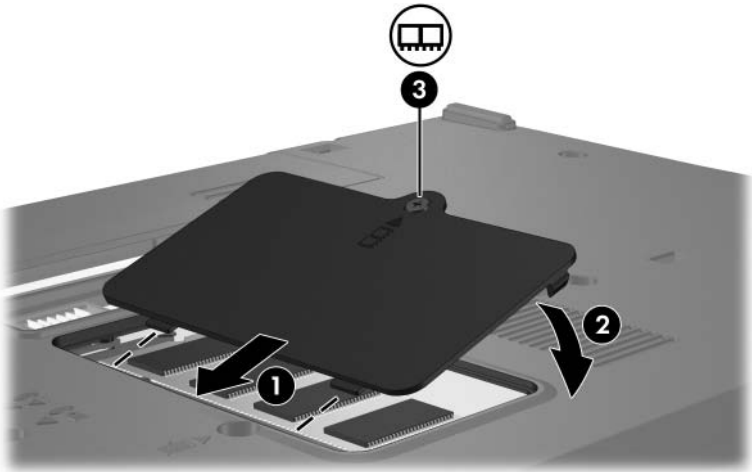
- a. Align the notched edge **1** of the memory module with the tab in the memory module slot.

△ To prevent damage to the memory module, hold the memory module by the edges only. Do not touch the components on the memory module.

- b. With the memory module at a 45-degree angle from the surface of the memory module compartment, press the memory module **2** into the memory module slot until it is seated.
- c. Gently press the memory module **3** down, applying pressure to both the left and right edges of the memory module, until the retention clips snap into place.



12. Align the tabs **1** on the memory module compartment cover with the notches on the computer.
13. Close the cover **2**.
14. Tighten the memory module compartment cover screw **3**.



15. Replace the battery.
16. Reconnect external power and external devices.
17. Turn on the computer.

If the computer displays a message indicating that the size or configuration of the memory has changed, press **f1** to save the changes.



# Upgrading a memory module in the primary memory module slot

To upgrade a memory module in the primary memory module slot:

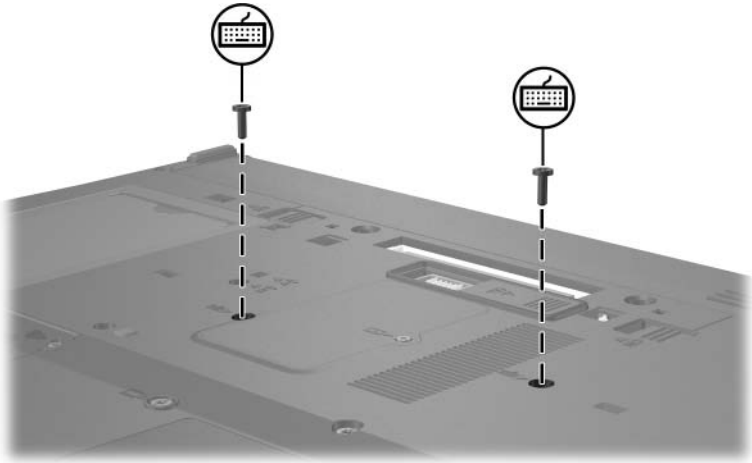
1. Save your work and close all open programs.



If the computer is in the Sleep state or in Hibernation, you must first exit Sleep or Hibernation before shutdown is possible.

2. Click **Start**, click the arrow next to the **Lock** button, and then click **Shut Down**.
3. Close the display.
4. Disconnect all external devices connected to the computer.
5. Unplug the power cord from the AC outlet.
6. Turn the computer upside down on a flat surface.
7. Remove the battery from the computer.

8. Remove the 2 keyboard screws.



9. Turn the computer over and open it.

- Slide the 4 keyboard latches **1** to release the keyboard.

△ To avoid damage to the computer, do not disengage the keyboard connector or pointing stick cable.

- Gently lift the top edge of the keyboard **2** and rotate it toward the front of the computer until the keyboard rests upside down on the palm rest.



12. Remove the memory module from the memory module slot:

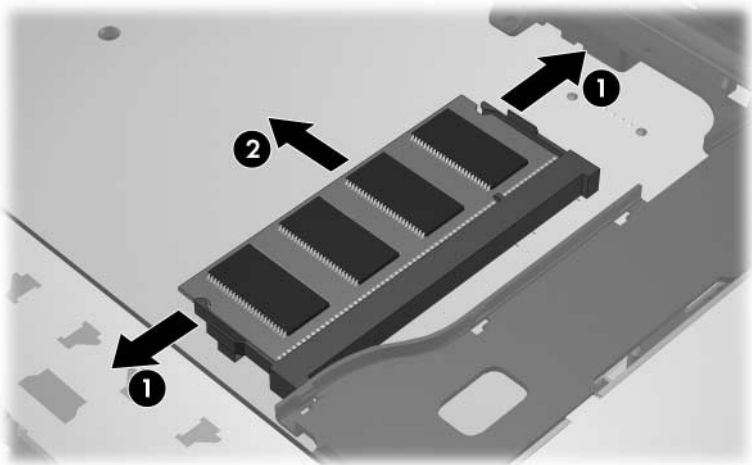
- a. Pull away the retention clips **1** on each side of the memory module.

The memory module tilts up.

△ To prevent damage to the memory module, hold the memory module by the edges only. Do not touch the components on the memory module.

- b. Grasp the edge of the memory module **2**, and gently pull the module out of the memory module slot.

To protect a memory module after removal, place it in an electrostatic-safe container.

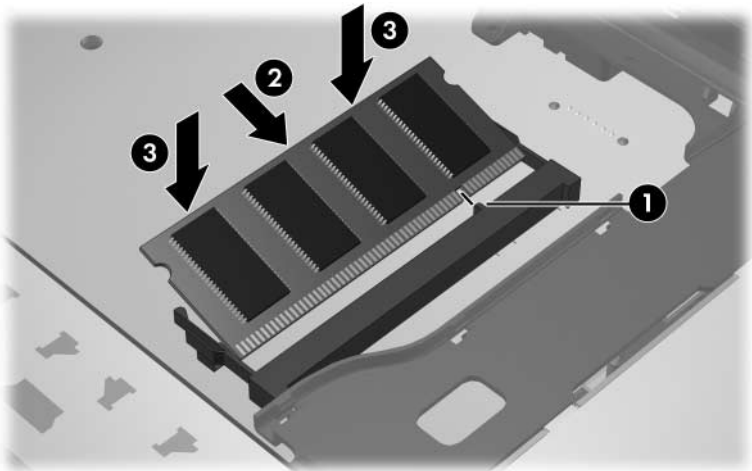


13. To insert a memory module:

- a. Align the notched edge **1** of the memory module with the tab in the memory module slot.

△ To prevent damage to the memory module, hold the memory module by the edges only. Do not touch the components on the memory module.

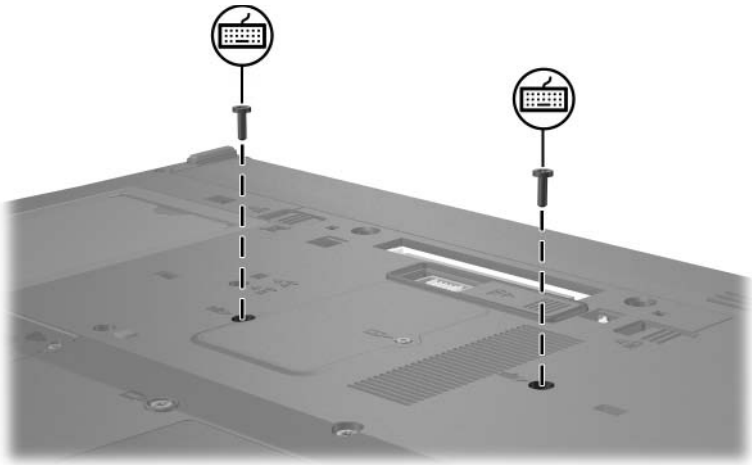
- b. With the memory module at a 45-degree angle from the surface of the memory module compartment, press the module **2** into the memory slot until it is seated.
- c. Press the memory module **3** down, applying pressure to both the left and right edges of the memory module, until the retention clips snap into place.



14. Return the keyboard to its previous position **1** and slide the 4 keyboard latches **2** to lock the keyboard.



15. Turn the computer upside down on a flat surface.
16. Replace the keyboard access screws.



17. Replace the battery.
18. Reconnect external power and external devices.
19. Turn on the computer.

If the computer displays a message indicating that the size or configuration of the memory has changed, press **f1** to save the changes.

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First Edition: January 2007

Document Part Number: 419668-001